

PATENT

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Date: July 30, 2008

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Anders Hejlsberg, *et al.*

Examiner: James D. Rutten

Serial No: 09/894,331

Art Unit: 2192

Filing Date: June 28, 2001

Title: OBJECT-ORIENTED PULL MODEL XML PARSER

**Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450**

REPLY TO EXAMINER'S ANSWER DATED MAY 30, 2008

Dear Sir:

Appellants' representative submits this Reply Brief in response to the Examiner's Answer mailed May 30, 2008.

I. Regarding the Rejection of Claims 1-5, 8, 10-12, 16-20, 22-24, 26, and 27 Under 35 U.S.C. §103(a)

Claims 1-5, 8, 10-12, 16-20, 22-24, 26, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Call (US 2002/0143521 A1) in view of Houben *et al.* (US 2002/0147745). Reversal of this rejection is requested for at least the following reason. The combination of Call and Houben *et al.* does not teach or suggest all aspects set forth in the subject claims.

As was stated in appellants' appeal brief and is reiterated herein once again, appellants' claimed subject matter relates to parsing XML, and particularly to an object oriented pull model XML parser. More particularly, the subject matter as claimed provides a configurable, object oriented pull model XML parser that exposes an interface that facilitates abstracting input sources. The object oriented pull model parser facilitates incrementally and selectively parsing data from an XML document thereby mitigating over-parsing problems associated with conventional systems (e.g., excessive memory and/or processing requirements). Because the pull model parser is object oriented and exposes an interface, the subject matter as claimed simplifies interactions with other programs, processes, objects, and the like, that in turn facilitates providing high-level abstractions of XML data sources. Moreover, since XML can contain external entity references, the claimed subject matter can selectively expand such external references, thus providing flexibility advantages concerning document location and entity expansion over conventional systems. Further, since an XML document can contain invalid and/or ill formed XML, the claimed subject matter can determine whether the pulled XML is well formed and/or valid, where well-formedness comports with, for example, World Wide Web Consortium (W3C) standards, and validity concerns adherence to one or more user defined formats, such as, for example, Document Type Declarations (DTDs) and/or schema. Additionally, the parser associated with the claimed subject matter facilitates parsing data as a virtual node is moved over a stream of XML data. Pulling nodes from an input stream in such a manner provides advantages over conventional systems in that if a user does not wish to parse certain nodes in an input stream, the virtual node can overlook or pass over these undesired nodes without presenting them for parsing. Such a facility reduces the amount of data that the parser and/or a user program needs to interact

with and simplifies conventional processes like stopping parsing when a certain point in the input stream is reached. To this end, independent claims 1, 16, and 27 recite similar features, namely: *a scanner that parses an XML stream to locate at least one XML token associated with an XML item, **the XML stream includes information from at least two data stores***. Call and Houben *et al.* alone or in combination, fail to teach or suggest these aspects of appellants' claimed subject matter.

Call relates to electronic data processing systems and more particularly, to methods and apparatus for storing and transmitting both variable length data (including text) and fixed length data, and for performing processing operations on such data. While the cited document provides mechanisms for storing and manipulating XML documents and provides an API for processing documents in accordance with an interface specification for the Document Object Model (DOM) as defined by the World Wide Web Consortium (W3C), or by means of a SAX API, the cited document does not provide that the XML stream from which an XML item is to be extracted comprise information from at least two data sources. In the Response to Argument section of the Office Action dated July 6, 2007, the Office contended that Call discloses these pertinent aspects at paragraphs [0023], [0031], [0033]-[0034], [0038], and [0044]. Appellants' representative respectfully once again disagrees with this assertion. Paragraph [0023] provides: "data stored in the integer array is subdivided into items, and items are subdivided into fields. Items may be organized into more complex data structures, such as relational tables, hierarchical object structures, linked lists and trees, and the like, using special fields called links." Paragraph [0031] states: "each item's physical storage location is placed in a lookup table indexed by itemnumber, allowing any item to be indirectly addressed by is itemnumber, and allowing itemnumber links to be rapidly dereferenced to obtain the location of linked items." Paragraphs [0033]-[0034] discloses: "the metadata describing each itemtype consists of: (1) an optional name (which may be a qualified name in a namespace). The item name may be supplied by the user, or derived automatically from an XML schema or XML document. Two items whose type is identical in all other respects but which have different names are treated as different item types and are assigned different itemtypenumbers. Item names need not be unique if associated with differing type information." Paragraph [0038] provides: "each item is composed of a

predetermined set of one or more numbered fields (some of which may be empty), with the data in each field being located at (or via) predetermined integer positions within the item as specified by the itemtype's field map. Thus, while the position of items with respect to other items has no logical significance, the position of every field within an item is specified by the field map in the item type.” Further, paragraph [0044] provides: “(1) Field name (if any), which may be a qualified name in a namespace. The field name may be supplied by the user, or by an XML schema or XML data when a named element or attribute is stored as a field.” Review of the cited passages makes evident that Call organizes items in complex data structures (e.g., relational tables, hierarchical object structures, linked lists, trees, and the like) utilizing fields within the data structure as links. Further, each item’s physical storage location can be placed in a lookup table indexed by item number which allows items to be indirectly addressed by item number allowing links to be rapidly dereferenced to obtain the location of linked items. Nevertheless, such disclosure does not rise to a teaching or suggestion of *the XML stream includes information from at least two data stores*.

Additionally, in response to the Office’s contention (*see* Final Office Action dated July 6, 2007, page 3, and Examiner’s Answer dated May 30, 2008, page 4) that disclosure of a namespace provides sufficiency to fulfill the Office’s burden with regard to XML streams that include information drawn from at least two data stores, is clearly in error. A namespace as would be commonly understood and appreciated by those of ordinary skill in the art is utilized to provide context for, and to allow for disambiguation, of items being held in a data store. For instance, a hierarchical directory structure that enumerates the content of a data store can be considered a namespace. However, to attribute disclosure of a namespace alone as teaching or suggesting a separate and/or distinct data store or a multiplicity of data stores is to strain the bounds of plausibility and to invidiously misconstrue the cited document beyond its reasonable permissible interpretation.

Accordingly, it is submitted and contrary to the Office’s assertions, Call does not provide that the XML stream from which an XML item is to be extracted comprises information from at least two data sources/stores. Nowhere in Call is there contemplation, let alone articulation of, a data stream that is drawn from at least two data

stores. Appellants' claimed subject matter in contrast provides and discloses parsing an XML stream that comprises information from two or more data stores to locate XML tokens associated with an XML item. Thus, it is submitted that the primary document is clearly silent with respect to the salient features recited in the subject claims, and thus deficient and distinguishable from the claimed subject matter in this regard.

Further, in response to the Office's statement in the Examiner's Answer (*see*, Response to Argument, at page 12) that page 10, lines 10-11 of the originally filed specification does not appear to particularly limit the definition of the term "data store" with respect to appellants' claim element *the XML stream includes information from at least two data stores*, it should be noted that Fig. 2 provides depiction of a multiplicity of XML data stores (e.g., data store 250_{AI} through data store 250_{AN}). Additionally the commentary associated with Fig. 2 provides

In one example of the system 200, the pull model parser includes a reader 222 that can interact with a scanner 230 to facilitate selectively pulling XML items from **XML data stores** (e.g., data store 250_{AI} through data store 250_{AN}, collectively the data stores 250) *via* a stream 240. (*See* Appellants' Specification, page 10, lines 4-7) (emphasis added).

Further it is submitted the Office, contrary to *In re Van Geuns* 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993), is attempting to read limitations from the specification into the claims. While appellants' representative is cognizant that claims are to be interpreted in light of the specification, where however, as the Office readily admits and concedes, the specification does not constrain the meaning of terms set forth in the claims to a specific closed grouping or provide a meaning inconsistent with that ordinarily and reasonably comprehended by those of ordinary skill in the particular field of endeavor, opting rather for an inclusive open ended taxonomy of items, then such terms are to be construed to mean exactly what they say (e.g., the terms as recited in the claims are to be given their plain meaning unless such meaning is inconsistent with the specification).

Furthermore, as alluded to above, the specification does not disabuse one of ordinary skill in the art of the fact that appellants have not specifically and/or selectively attributed a straitened meaning to the terms set forth therein. More particularly, the

specification at page 10, lines 10-11, does not attribute to the term “data store” a meaning inconsistent to that which one of ordinary skill would have comprehended on reading appellants’ specification. Rather, page 10, lines 10-11 articulate that the term “data store” can include, but is not necessarily limited to, “files, databases, pipes, streams, memory and queries.”

Moreover, Call’s silence with regard to the aspects recited in independent claims 1, 16, and 27, provides compelling and ample indication that the Office is impermissibly employing appellants’ own teaching to cure and/or remedy omissions/deficiencies in the cited document. The Office is thus insidiously utilizing appellants’ specification as a 20/20 hindsight-based road map to achieve the purported invention. In essence, the Office has based the rejection solely on an assertion that it would have been obvious to do something not suggested in the art based on the advantages disclosed in appellants’ specification. This rationale has been condemned by the Court of Appeal for the Federal Circuit as being sophistic. *See e.g., Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593 (Fed. Cir. 1987). Additionally, as the Office clearly acknowledges and concedes, Call fails to disclose: *a retriever that ... **exposes data model and/or Infoset information associated with the pulled XML item.*** In order to remedy this deficiency the Office offers Houben *et al.*

Houben *et al.* relates generally to document servers and more specifically to document servers integrated with legacy data systems. Nevertheless, like the primary document, the secondary document does not teach or suggest a scanner that parses an XML stream to locate at least one XML token associated with an XML item such that the XML stream includes information from at least two data stores. Rather, the secondary document, like the primary document above, is silent regarding the pertinent aspects of appellants’ claimed subject matter. Accordingly, since neither Call nor Houben *et al.* make obvious the appellants claimed subject matter, reversal of this rejection with respect to independent claims 1, 16, and 27 (and associated dependent claims) is respectfully requested.

CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-5, 8, 10-12, 16-20, 22-24, and 26-27 be reversed.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP298US].

Respectfully submitted,

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